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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/811,376

03/25/2004

John B. Hampshire II

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EXAMINER

AMINI, JAVID A

ART UNIT

PAPER NUMBER

2628

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

04/05/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/811,376

Applicant(s)

HAMPSHIRE ET AL.

Examiner

Javid A. Amini

Art Unit

2628

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-54 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/25/2004</u> .   | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-54 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claim 1 recites nothing but the physical characteristics of a form of energy that is sensing light energy is nonstatutory natural phenomena.

Claims 7-11, 14 have no tangible result, the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claims 2-6, 12-13, 15-17 are rejected, because they are depending to the rejected claims.

Claim 18 is rejected the same rationale as the rejection of claim 1.

Claims 19-23 are rejected, because they are depending to the rejected claim 18.

Claim 24 is rejected the same rationale as the rejection of claim 1.

Claim 35 is rejected because it has no tangible result, the claim must recite more than a § 101 judicial exception, in that the process claim must set forth a practical application of that § 101 judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).

Claims 25-34, 36-37 are rejected because they are depending to the rejected claims 24 and 35.

Claim 38 is rejected the same rationale as the rejection of claim 1

Claims 39-52 are rejected because they are depending to the rejected claim 38.

Claims 53 and 45 are rejected the same rationale as the rejection of claim 1, and the preamble of the claims recited "A computer-readable medium on which is embedded computer software," Examiner's suggestion: the acceptable language in the computer processing may be read as follows: a computer-readable medium embodied with a computer program ....

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6, 12-13, 18-23, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jung et al. US Pub. No. 2003/0016359 A1 (hereinafter Jung), and in view of Cate et al. Patent number 5,089,976 (hereinafter Cate).

Claim 1.

Jung at paragraph [0001] teaches a machine vision method (devices and methods for measuring optical characteristics such as color spectrums) comprising:

*(Examiner's interpretation regarding to the phrase "machine vision" is as follows: the method senses light energy associated with a scene. The reference Jung refers an object tooth as the*

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scene). Jung at paragraph [0019] teaches sensing light energy associated with a scene, using a broad band spectrophotometer or a colorimeter; Jung at [0216] teaches generating color image data representing at least a portion of the scene i.e. referred as a video image.

Jung does not explicitly specify the data are arranged as pixels, and the data for a given pixel comprise an intensity value, a hue value, and a chroma value.

However Cate at col. 3 lines 60-61 teaches the intensity value representing the total sensed light energy associated with the pixel.

Cate at col. 4 lines 5-8 teaches the hue value representing a dominant or average frequency (*examiner's interpretation regarding hue value: it is well know in the art that the hue value is the dominant wavelength of a color*) of the light energy associated with the pixel, see fig. 1, and the chroma value (*examiner's interpretation regarding chroma value: it is well know in the art that Chroma is short for "chrominance" the attributes of a color, which include its hue (frequency) and saturation (amount of black)*) representing a measure of the light energy on a side of the visible spectrum complementary to the hue. Cate at col. 4 in table 1 shows the equations for Hue and Chroma.

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine the normalization algorithm 12 in fig. 1 of Cate into microcontroller 642 in fig. 39 of Jung because Cate teaches no specific requirements on choice of the device, although its performance will affect the accuracy of the output, which is a combined three waveband information array of normalized data.

Claim 2.

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Jung at [0105] teaches the light energy associated with the scene comprises reflections of light from an illumination source at an illumination level, whereby the hue value is substantially invariant to changes in the illumination level or intensity level.

Claim 3.

Jung at [0313] teaches additional narrow band filters, which are utilized for a correction factor, the same as under white illumination, see also fig. 14A.

Claim 4.

Jung at [0334] teaches the hue and intensity values (i.e. the source of fiber optic) are substantially invariant to changes of each other.

Claim 5.

Jung at [0178] teaches the sensing step comprises measuring three primary color values; and the generating step comprises converting the three primary color values for the given pixel to a set of values comprising the chroma value, the hue value, and the intensity value.

Claim 6.

Jung does not explicitly specify the three primary color values are red, green, and blue.

However, Cate at col. 7 in table 5 teaches the primary colors.

Thus, it would have been obvious to a person skill in the art at the time of the invention to combine the transformation algorithm 14 in fig. 1 of Cate into microcontroller 642 in fig. 39 of Jung because Cate teaches no specific requirements on choice of the device, although its performance will affect the accuracy of the output.

Claim 12.

Jung in fig. 1 illustrates processing the generated color image data.

Claim 13.

Jung at [0178] teaches after the processing step, converting the chroma, hue, and intensity values to red, green, and blue values.

Claim 18.

Regarding claim 18, see rejection of claim 1 that is similar in scope and rejected it under the same rationale.

Claim 19.

Jung at [0350] teaches the processing step comprises: compressing (as data for the bar can be encoded in the bars) one or more of the chroma, hue, and intensity values, whereby the one or more compressed values can be stored, transmitted, or processed more efficiently.

Claim 20.

Jung at [0110] teaches the compressing step comprises: quantizing (i.e. desired range) the intensity value; and quantizing the chroma and hue values; (Examiner's interpretation regarding the term "quantizing": it means providing a range of values for the intensity, chroma and hue, e.g. a range of value 200-250 for the intensity value). It's obvious to set a range for those values, because Jung in fig. 3 illustrates using filters, and each filter contains a range of values.

Claim 21.

Jung in fig. 3 illustrates that each filter is performed independently and in parallel.

Claim 22.

Jung at [0281] teaches quantizing the intensity value results in a quantized intensity value having nine bits or less, Jung at [401] teaches the range of an ACD must be large to accommodate the high red light sensitivity and it must also be precise enough to permit the low sensitivity

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elements to have sufficient gain to make quality measurements, and Jung does not explicitly specify the step of quantizing the chroma and hue values results in quantized chroma and hue values having a total of nine bits or less, however, it's obvious to implement nine bits or less for the chroma and hue values.

Claim 23.

Jung at [0350] teaches comprising at least one step selected from the group consisting of: transmitting the compressed (as data for the bar can be encoded in the bars) one or more of the chroma, hue, and intensity values; Jung in fig. 18 step 294 illustrates storing the compressed one or more of the chroma, hue, and intensity values; and Jung at [0178] teaches processing the compressed one or more of the chroma, hue, and intensity values.

Claim 53.

Jung in fig. 1 illustrates a computer-readable medium, Jung at [0287] teaches storing program code. The rest of the claim limitations are rejected the same rationale as the rejection in claim 1.



*Conclusion*

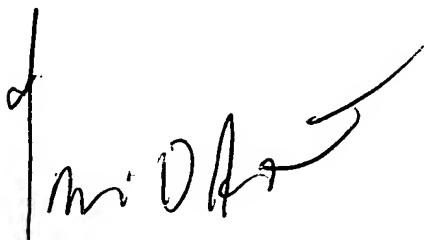
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javid A. Amini whose telephone number is 571-272-7654. The examiner can normally be reached on 8-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kee Tung can be reached on 571-272-7794. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Javid A Amini  
Examiner  
Art Unit 2628

J.A.

A handwritten signature in black ink, appearing to read 'Javid Amini', with a stylized flourish at the end.